

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

(Cancel Claims 1-14)

15. (New) Particulate titanium dioxide of rutile crystalline form having a primary particle size between 0.5 and 2.0 μm and a reflectivity to visible light less than 95%.

16. (New) The particulate titanium dioxide of claim 15 consisting essentially of 0.05 to 0.4% by weight of aluminum oxide and 0.1 to 0.8% by weight of zinc oxide, the balance being titanium oxide.

17. (New) The particulate titanium oxide of claim 16 wherein 0.05 to 0.3% by weight of aluminum oxide and 0.05 to 0.5% by weight of zinc oxide are incorporated in the crystalline lattice.

18. (New) The particulate titanium dioxide of claim 15 exhibiting a transmittance to infrared radiation which is not 0.2 times more than that of the rutile titanium dioxide pigment of 0.2 to 0.4 particle size in the cumulative transmittance values over 1.4 to 3.0 μm wavelength range when the transmittance is measured on a transparent paint film containing the titanium dioxide particles at the same concentration.

19. (New) The particulate titanium dioxide of claim 15 having a high spreadability on the human skin in a cosmetic medium.

20. (New) A process for producing the particulate titanium oxide of claim 15 comprising: blending hydrated titanium dioxide with 0.1 to 0.5% by weight of an aluminum compound calculated as Al_2O_3 , 0.2 to 1.0% by weight of a zinc compound calculated as ZnO , and 0.1 to 0.5% by weight of a potassium compound calculated as K_2CO_3 , all percentage being based on the TiO_2 content of hydrated titanium dioxide; and calcining the blend at a temperature between 900°C and 1100°C.

21. (New) The process of claim 20 wherein said aluminum compound is selected from the group consisting of aluminum oxide, hydrated aluminum oxide, aluminum sulfate and aluminum chloride.

22. (New) The process of claim 20 wherein said zinc compound is selected from the group consisting of zinc oxide, zinc sulfate and zinc chloride.

23. (New) The process of claim 20 wherein said potassium compound is potassium hydroxide or potassium chloride.

24. (New) The process of claim 20 further comprising the steps of blending said hydrated titanium oxide as a wet cake before calcination with said aluminum, zinc and potassium compounds, and drying the wet cake so that the TiO_2 content is 50 to 60% by weight of dried blend.

25. (New) A coating composition comprising an amount effective to shield IR radiation of the particulate titanium oxide of claim 18.

26. (New) A plastic molding compound comprising an amount effective to shield IR radiation of the particulate titanium dioxide of claim 18.

27. (New) A cosmetic composition comprising an amount effective to shield IR radiation of the particulate titanium dioxide of claim 18.

28. (New) A cosmetic composition comprising an amount effective to improve the spreadability of the particulate titanium dioxide of claim 19.